RCEM QIAT (2021)

Primary Quality Improvement Assessment Tool ST1-2

Trainee Name	
Trainee GMC	
Trainee Post	
Date of Completion	

Part A – For *trainee* to complete – **Please use this tool to describe the Quality Improvement activity you have undertaken this year. This may include any activity or projects you have assisted with, or undertaken yourself.** At ST6 you will be expected to attach a full report of the project you have undertaken for CCT.

1 - The project

1.1 – Analysis of problem

Please write a focused description of the problem that the QI/Patient safety project was designed to tackle, with why you think it was a problem in your department. What evidence do you have to back up your opinion? How might this improve care for patients?

Problem – In Charing Cross Hospital ED (Majors) too many cannulas are being inserted into patients and then never used for administering drugs.

Objective data

During the initial data collection it was found that 75% of patients were cannulated as part of their triage process, either in RAT or from the waiting room (break-down data comparing the two routes was not done). A further 11% of patients were cannulated later in their attendance in the emergency department, bringing the total of patients cannulated to 86%. Of the 86% of patients that had a cannula, only 62% were used for IV medications.

Subjective data

Patients were asked their thoughts on the experience of having a cannula. 60% of patients surveyed described having a cannula as either uncomfortable or painful (or words similar).

Cost and environmental impact

Cannulation and venepuncture were compared in terms of their cost and environmental impact. Sources indicate that cannulation costs roughly twice as much as venepuncture alone [1,2] and simply comparing the amount of single-use plastic produced from the equipment needed for cannulation versus that which is required for venepuncture in Charing Cross ED demonstrated that cannulation has roughly twice the environmental impact as well.

How would this improve patient care?

Initial data showed that patient's do not like having cannulas – they are painful and uncomfortable. By reducing cannula use we will be reducing unnecessary pain and discomfort for our patients.

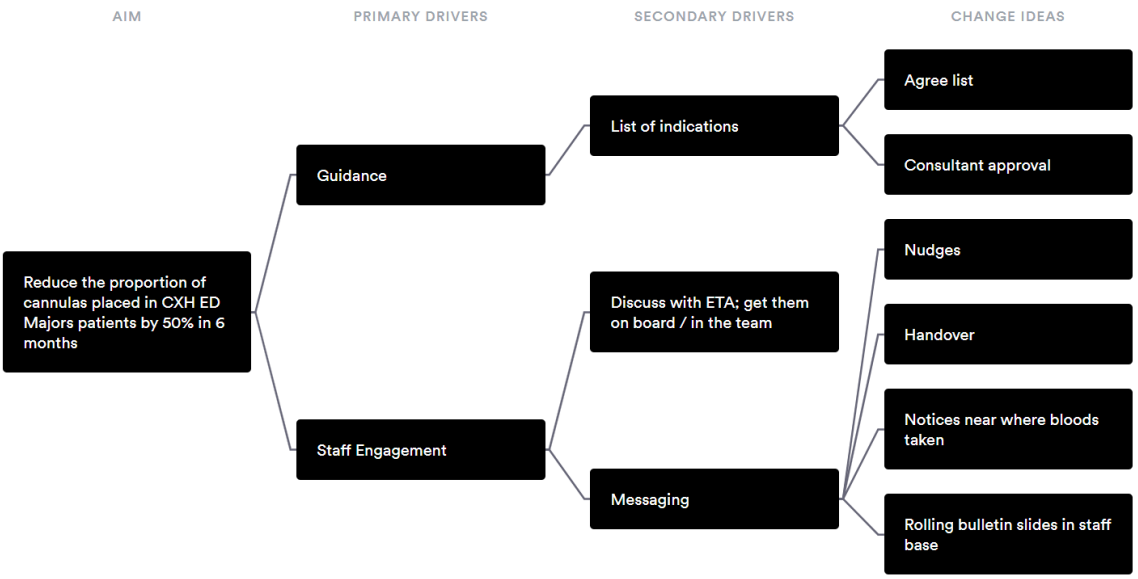
1.2 – Use of QI methods

Please describe any QI methodology chosen and why this might help a project improve patient-care/a problem, and sustain any change. Please include any QI tools used and how they helped to complete the project. Include your role in completing these.

I used a traditional clinical audit cycle to structure the QIP:

1. Identify the problem – too many cannulas are being inserted and not used (problem was initially highlighted in a staff email sent around by one of the ED consultants, however
2. Define criteria and standards – cannulas should only be inserted into patients who then go on to have their cannula used for drugs
3. Monitor performance – data collection from a random selection of patients in ED majors
4. Compare performance with criteria and standards – we found that a large proportion of patients did not have their cannula used for anything apart from taking blood
5. Implement change – posters, staff education and publicity, change the way cannulas are requested from the phlebotomists
6. Complete the cycle to sustain improvements – data was collected again to show improvement. Standards were still not being met so further changes and improvements will be implemented and the audit cycle will continue.

Driver mapping:



I also used staff surveys to measure staff engagement in the project after we had introduced change. This helped us appreciate where we needed to increase visibility and publicity.

1.3 – What was the aim of the project?

Please describe.

Specific – to quantify and then reduce the proportion of unnecessary cannulations carried out in Charing Cross Emergency Department (Majors only)

Measurable – cannulas inserted vs cannulas used for IV medications as primary outcome

Achievable – requires a change to the decision-making process for doctors, nurses and ETAs

Relevant – cannulation is one of the most common procedures carried out in the emergency department, cannulation causes patient discomfort and pain, cannulation is bad for the environment due to the resulting plastic waste

Time-bound – results can be achieved within 6 months

1.4 – Measurement of outcomes

What measures were used and why? What did they show? How did they help to define/improve the problem?
Please document problems and/or unexpected data. Describe why continuous data is preferential to 'before and after' data.

Main outcomes were: (1) Proportion of patients cannulated as part of triage (2) Proportion of cannulas that were used for IV medications. These outcomes were used as they are easy to measure, however one limitation identified was that not every cannula inserted was documented on Cerner.
We also took subdata analysis to look for differences between patients coming through RAT or the waiting room. This helped us identify which area needed more improvement.
During the audit it was found that the proportion of patients who were cannulated as part of their triage had reduced to 52%. The proportion of patients cannulated later during their admission also slightly reduced to 9%, bringing the total of majors patients cannulated to 61% - this is a 25% reduction from initial findings. Of the cannulas inserted, 73% of them were used for IV medications – an increase of 11%.
Continuous data is preferential to "before and after" data as it allows constant analysis of small changes, and therefore it is possible to identify the changes that work really well and others which need further improvement.

1.5 – Evaluation of change

What changes were made during the project and what was your role in them. Please evaluate the changes and how they improved the problem, including analysis of any data.

Overview
The two main strategies for improving outcomes were "guidance" and "staff involvement". It became clear during early stages of planning that both parts were essential and relied on each other. For example, a list of indications for which patients to cannulate and which to avoid would only be useful and effective provided the ED staff were aware of the list and felt motivated to use it. Likewise staff could be motivated to reduce unnecessary cannulas but without some form of guidance it may be harder to carry out that change.
List of indications
A list of indications was drafted by the Cannula Reduction QIP team and was subsequently finalised and approved by the emergency medicine consultants. It was targeted to be used by the triage nurses and junior doctors who often request the cannulas for patients, and the ETAs who often insert the cannulas. The list of indications takes the form of a "traffic light" system – green for the presentations which should always have a cannula, amber for the presentations which often do but

may require some clinical evaluation first, and red for those which seldom require a cannula and thus should prompt a discussion with a senior decision maker prior to one being inserted. The aim of the list of indications was two-fold: firstly, it should make decision making easier when deciding if a patient needed a cannula. Secondly it was meant to empower staff (the ETAs in particular) to feel confident in questioning the cannulation requests from triage nurses/doctors, especially if the presentation fell into the red list.

Staff engagement

A poster was designed to motivate staff into engaging with the project. The poster summaries the initial audit data including the data on patient experience, as well as laid out the cost and environmental impact of cannulation.

Announcements were made during morning handover and the posters were part of the rolling bulletin slides in the staff base. The list of indications and motivational poster were put up in strategic areas of the department (RAT, triage computer, staff break room).

Furthermore the QIP team grew to include representation from the nurses and ETAs – this was a vital step as having many loud voices on the shop floor publicising the QIP and motivating people to reduce cannulation is likely to be the strongest force for change.

Nudge theory

A recent strategy for improvement which has been implemented is a change to the design of the phlebotomy request sheet in majors. There is now no longer a column in which nurses/doctors tick if they want to request a cannula. Instead they are being encouraged to write that a cannula is needed (and ideally the indication) in the "special requests" column. The theory behind this is that the small inconvenience and brief extra step required will stop some cannulas from being requested without a second thought.

Reflection

I think that the interventions together have been effective at reducing the numbers of cannulas used. The interventions, when used in combination, have worked to shift the culture of the department from one where cannulas are inserted without much thought or consideration, to one where people stop and think about the indication and necessity for the procedure. The data listed in the section above demonstrates this.

2 - Working with others

2.1 – Team working

Please describe the team involved. How did the team work together, and what was your role in the team? How was your contribution encouraged? How was any conflict managed? How does a functioning team affect patients and staff? What 'team science' do you know?

1. Myself – team leader and motivator. I came up with the design of the project, I delegated tasks to other members of the team and kept them motivated, I helped in data collection, I analysed the data, I designed the posters, I made announcements during handover, I presented to consultants at the "QIP Dragons Den", and I tried to publicise the QIP to staff in the ED as much as possible.
2. 3 x F2 doctors – data collection (pre- and post- change), comprised the list of indications and liaised with consultant team to finalise list, collected staff survey data, found information on

economic and environmental impact of cannulas, tried to publicise the QIP as much as possible to other ED staff

3. 1 x staff nurse and 1 x ETA – redesigned the phlebotomy request sheet for majors, motivated other staff members in the ED to reduce cannula use, vital for staff engagement in the project

There was no conflict in the team – everyone worked very well together. This allowed the project to run smoothly and I am sure contributed to the success.

2.2 – Stakeholder engagement

Were any stakeholders involved and how were they prioritised? How did they affect the changes in the project. What was your role in this. What is the difference between a team member and a stakeholder?

The main stakeholders identified were the nurses and doctors who take part in triaging patients as these are the members of staff who request cannulas. ETAs were also important stakeholders as they are the members of staff who tend to actually insert the cannulas, but at an early stage of the project they felt that they couldn't always question the requests of the triaging nurses and doctors. To target the consultants we worked with them to create a consultant-approved list of indications for cannulas. To target the nurses we did lots of publicity and announcements at handover. We also tried to make the list of indications as comprehensive as possible without being too prescriptive, as we felt it was important to maintain the use of clinical judgement in deciding who needed a cannula. We hoped that the list of indications would also empower the ETAs to question requests for cannulas e.g. "this patient does not have a presentation that is on the list – can you tell me why you think they need a cannula?".

A team member is someone who has some involvement in the planning of an audit or in bringing about change. The stakeholders are the members of staff who will ultimately influence the success or failure of the project – they are the individuals who need to be targeted to ensure the changes are implemented in practice.

2.3 – Patient and carer involvement (if possible)

Please describe how this project might improve the quality of care for patients or carers. Describe the 6 aspects of Quality (IOM). Did the project actively seek to engage and involve the patient/carer voice in the change? If not how could it in the future?

Safety – we will reduce the harm to patients by not cannulating unnecessarily – causing pain, potentially introducing infections etc
Effective – avoiding overuse of cannulas when there is no indication or need for them
Patient-centred – we know that patients do not like having cannulas, this project takes into consideration this dislike
Timely – cannulas take longer to insert than doing venepuncture alone and patients sometimes are left waiting to have their cannulas removed prior to discharge.
Cost-effective – cannulas are more expensive than venepuncture alone
Equity – this project aims to treat patients equally and fairly

We surveyed patient experience during the initial planning stage of our project. We found that most patients disliked having a cannula. A few patients said that they would rather "just be stabbed once" – i.e. they would rather have a cannula from triage even if they didn't go on to need it, to

avoid potentially having another painful procedure involving needles; thus highlighting differences in patient preferences.
3 – Reflection on leadership and learning
3.1 – Self awareness
Personal qualities **-** Please reflect on your own personal qualities and how these affected the project. Self-awareness and values; Seeking feedback; Workload under pressure; Managing conflict; Well-being.
I think I made a good project leader as I am organised and good at planning ahead. I also think I led by example and put in a lot of effort into the tasks I delegated to myself, therefore motivating others to put in effort as well. As the ED rota can be quite busy at times I found that the project would progress in spurts, which corresponded to when I had chunks of time off.
3.2 – Learning
Longitudinal learning in Quality Improvement (from previous year) **-** Please outline what this year has contributed to your development and knowledge of QI
I have learnt a lot about quality improvement models and methods. In particular the things I have found to be most valuable, which I was not aware of before, are: 1. Importance of a multi-disciplinary team – this made a big difference in bringing about a change in the culture of a department and motivating stakeholders 2. Nudge theory – small changes that gently motivate people can be really effective 3. Parallel improvements/changes – in this project we would not have had the success we had without the list of indications and the staff publicity/motivation happening at the same time. I will take this approach when I do QIPs in the future.
3.3 – Personal Development
Longitudinal learning in Quality Improvement (future years) **–** Please describe your plans for next year in QI. What do you hope to learn/achieve? How do you hope to contribute to improving patient care?
I have handed over this QIP to another SHO now I have left the department, who I hope will continue to improve and develop the QIP. Next year my first rotation is ITU – I hope to identify an area of improvement early so I have time to enact real change.

Part B – For *trainer* to complete – Please use this tool to assess the Quality Improvement activity your trainee has undertaken this year.

1 – Feedback – What has been done particularly well?
Free text
2 – Learning points – What could have been done differently?
Free text
2 – Recommendation for further learning or development

Free text
4 – Overall
Please indicate the level of the trainee’s performance in this QIAT
Please select - Does not meet - Meets expectations - Excellent

Signoff and actions

Please ensure this form is **signed off** by both the Assessor and Trainee via the "**Link**" button next to the form once saved.

Assessor Name	Assessor Designation / Job Title	Date
		Click here to enter a date.
Assessor GMC Number	Assessor email address	